

Comparisons of Job Characteristics

Focus Occupation: [Engineers, All Other \(17-2199\)](#)

Associated Occupation: [Architectural and Engineering Managers \(11-9041\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|--|
| Engineering and Technology | 5.7 | 23.2 | 20.1 | < Expanded education and/or training may be required |
| Design | 5.2 | 19.0 | 16.5 | < Expanded education and/or training may be required |
| Mathematics | 9.2 | 17.4 | 17.1 | 0 Current knowledge level may be sufficient |
| Computers and Electronics | 8.4 | 16.9 | 15.0 | < Expanded education and/or training may be required |
| Administration and Management | 8.4 | 14.4 | 10.6 | << Extensive education and/or training may be required |
| Physics | 4.3 | 13.0 | 14.8 | > Current knowledge level is likely sufficient |
| Building and Construction | 4.0 | 10.7 | 6.6 | << Extensive education and/or training may be required |
| Production and Processing | 6.0 | 10.7 | 12.9 | > Current knowledge level is likely sufficient |
| Personnel and Human Resources | 5.6 | 10.4 | 6.3 | << Extensive education and/or training may be required |
| Economics and Accounting | 4.4 | 8.1 | 6.5 | < Expanded education and/or training may be required |
| Telecommunications | 3.9 | 7.4 | 6.1 | < Expanded education and/or training may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 72

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|

| | | | | | |
|-----------------------------------|-----|------|------|----|--|
| Operations Analysis | 5.0 | 13.9 | 10.8 | << | Extensive development of skills in this area may be required |
| Coordination | 9.1 | 13.3 | 10.5 | < | A higher skill level may be required |
| Complex Problem Solving | 9.1 | 13.0 | 12.7 | 0 | Current skill level may be sufficient |
| Time Management | 8.9 | 12.8 | 10.4 | < | A higher skill level may be required |
| Management of Personnel Resources | 6.9 | 12.2 | 8.9 | << | Extensive development of skills in this area may be required |
| Mathematics | 6.2 | 11.7 | 12.8 | 0 | Current skill level may be sufficient |
| Systems Analysis | 6.5 | 10.7 | 11.7 | 0 | Current skill level may be sufficient |
| Systems Evaluation | 6.4 | 10.7 | 11.1 | 0 | Current skill level may be sufficient |
| Negotiation | 6.8 | 10.2 | 7.3 | << | Extensive development of skills in this area may be required |
| Management of Financial Resources | 3.3 | 9.7 | 5.8 | << | Extensive development of skills in this area may be required |
| Management of Material Resources | 3.7 | 9.2 | 5.9 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
|--|---------------------------------|--------------------------------|---------------------------|--------------------------------|---|
| Written Comprehension | 11.0 | 15.2 | 15.1 | 0 | Current ability level may be sufficient |
| Oral Comprehension | 12.5 | 15.0 | 14.8 | 0 | Current ability level may be sufficient |
| Deductive Reasoning | 10.6 | 13.9 | 15.0 | 0 | Current ability level may be sufficient |
| Problem Sensitivity | 11.1 | 13.9 | 14.0 | 0 | Current ability level may be sufficient |
| Written Expression | 9.8 | 13.8 | 13.2 | 0 | Current ability level may be sufficient |
| Mathematical Reasoning | 6.3 | 13.3 | 13.4 | 0 | Current ability level may be sufficient |
| Information Ordering | 9.9 | 12.0 | 13.2 | 0 | Current ability level may be sufficient |
| Category Flexibility | 9.0 | 11.4 | 12.3 | 0 | Current ability level may be sufficient |
| Number Facility | 6.3 | 11.2 | 11.6 | 0 | Current ability level may be sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 84

Focus Occupation: Engineers, All Other (17-2199)

Associated Occupation: Architectural and Engineering Managers (11-9041)

| Tools and Technologies | Exclusivity |
|------------------------|-------------|
|------------------------|-------------|

| | |
|---|----|
| Autoclave and sterilizer equipment and accessories | 12 |
| Business function specific software | 1 |
| Chromatographic measuring instruments and accessories | 16 |
| Computer data input devices | 2 |
| Computers | 1 |
| Content authoring and editing software | 1 |
| Content management software | 6 |
| Data management and query software | 1 |
| Electrochemical measuring instruments and accessories | 9 |
| Fermentation equipment | 31 |
| Finance accounting and enterprise resource planning ERP software | 2 |
| Indicating and recording instruments | 2 |
| Industry specific software | 1 |
| Information exchange software | 1 |
| Laboratory decanting and distilling and evaporating and extracting equipment and supplies | 19 |
| Laboratory electrophoresis and blotting system and supplies | 26 |
| Laboratory enclosures and accessories | 17 |
| Laboratory heating and drying equipment | 13 |
| Laboratory incubating equipment | 20 |
| Network applications software | 1 |
| Spectroscopic equipment | 10 |
| Temperature and heat measuring instruments | 6 |
| Viewing and observing instruments and accessories | 4 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.